

**CLAIMS**

What is claimed is:

1 1. In a system for remotely managing a plurality of network devices wherein each  
2 device is managed with a respective unsigned device applet launched from its device, an  
3 apparatus comprising a plurality of unsigned applets, including a device applet, operating  
4 within a same shared environment, the plurality of unsigned applets comprising:  
5 a recipient applet comprising a model object of a non-graphical user interface  
6 class and a model adapter object of a graphical user interface class, the model adapter  
7 object being for unpacking information represented as one or more graphical user  
8 interface objects into a form usable by the model object;  
9 a transmitting applet comprising an initialization controller for obtaining a  
10 reference to the recipient applet and for obtaining a reference to the model adapter object,  
11 and a data handler comprising access to the reference to the model adapter object, the  
12 data handler representing information as one or more graphical user interface class  
13 objects and providing access to the one or more graphical user interface class objects to  
14 the model adapter object using the reference to the model adapter object; and  
15 the transmitting applet and the recipient applet being launched from different  
16 devices and being communicatively coupled within the shared environment.

1 2. The apparatus of claim 1 wherein the shared environment is a webpage.

1 3. The apparatus of claim 1 wherein the transmitting applet is a device applet, and  
2 the recipient applet is a central management applet.

1 4. The apparatus of claim 1 wherein the model adapter object is of the container  
2 class.

1 5. The apparatus of claim 4 wherein the model adapter object comprises an  
2 overloaded method for extracting the information in the graphical user interface object.

1 6. A system for remotely managing a plurality of network devices, each network  
2 device comprising a device server, the system comprising:

3 a client computer having a processor, a memory, a display, a communication  
4 device and a browser;

5 the browser being communicatively coupled via the communication device with  
6 the device servers;

7 the browser being for receiving a webpage from a launch device, the webpage  
8 comprising an unsigned central management applet and a request for an unsigned device  
9 applet from each of a plurality of device servers;

10 the browser being for requesting the device applets from the device servers; and

11 each device applet being capable of receiving device information directly from its  
12 respective device server, and being communicatively coupled to the central management  
13 applet within the same webpage.

1 7. The system of claim 6 wherein each device applet comprises a view object  
2 responsible for graphically displaying device information.

1 8. The system of claim 6 wherein the central management applet comprises a view  
2 object for displaying a graphical representation of information.

1 9. The system of claim 6 wherein each device applet is a transmitting applet.

1 10. The system of claim 6 wherein the central management applet is a recipient  
2 applet.

1 11. The system of claim 6 wherein the devices are fibre channel switches.

1 12. A method for remotely managing a plurality of network devices using a plurality  
2 of unsigned applets launched from different network devices, the plurality of unsigned  
3 applets including a device applet, wherein each device is managed with its respective  
4 device applet launched from its device, and the unsigned applets are communicatively  
5 coupled within the same shared environment, the method comprising:

6 obtaining references to the applets currently present in the shared environment;

7 testing the references to find a reference to a recipient applet in the plurality of  
8 unsigned applets;

9 responsive to finding the reference to the recipient applet, obtaining a reference to  
10 a desired model adapter object in the recipient applet;

11 representing device information as a graphical user interface object; and

12 providing access to the graphical user interface object to the model adapter object  
13 in the recipient applet using the reference to the model adapter object.

1 13. A method for remotely managing a plurality of network devices using a plurality  
2 of unsigned applets launched from different network devices, the plurality of unsigned  
3 applets including a device applet, wherein each device is managed with its respective  
4 device applet launched from its device, and the unsigned applets are communicatively  
5 coupled within the same shared environment, the method comprising:

6 unpacking device information represented as a graphical user interface object to a  
7 form usable by a model object of a non-graphical user interface class; and  
8 adding the unpacked device information to the model object.

1 14. A method for remotely managing a plurality of network devices in a system  
2 comprising a client computer having a processor, a memory, a display, a communication  
3 port and a browser, the browser being communicatively coupled with a plurality of device  
4 servers, each device server being located on a network device, the method comprising:

5 requesting from one of the devices a webpage having an unsigned central  
6 management applet and a request for an unsigned device applet from each of the device  
7 servers;

8 executing the requests for each unsigned device applet;

9 each device applet receiving device information directly from its respective device  
10 server; and

11 each device applet communicating its device information to the central  
12 management applet within the same webpage.

1 15. A computer usable medium comprising a device management system that causes  
2 generation of a plurality of unsigned applets, including a device applet, being launched  
3 from different devices and being communicatively coupled within a shared environment  
4 wherein each device is managed with its own device applet launched from its device, the  
5 device management system comprising:

6 a recipient applet comprising a model object of a non-graphical user interface  
7 class and a model adapter object of a graphical user interface class, the model adapter  
8 object being for unpacking information represented as one or more graphical user  
9 interface objects into a form usable by the model object; and

10 a transmitting applet comprising an initialization controller for obtaining a  
11 reference to the recipient applet and for obtaining a reference to the model adapter object,  
12 and a data handler comprising access to the reference to the model adapter object, the  
13 data handler representing information as one or more graphical user interface class  
14 objects and providing access to the one or more graphical user interface class objects to  
15 the model adapter object using the reference to the model adapter object.

1 16. A computer usable medium whose contents cause a computer to remotely manage  
2 a plurality of network devices using a plurality of unsigned applets launched from  
3 different devices, the plurality of unsigned applets including a device applet, wherein  
4 each device is managed with its respective device applet launched from its device and the  
5 applets are communicatively coupled within the same shared environment, the method  
6 comprising:

7 obtaining references to the applets currently present in the shared environment;

8 testing the references to find a reference to a recipient applet in the plurality of  
9 unsigned applets;  
10 responsive to finding the reference to the recipient applet, obtaining a reference to  
11 a desired model adapter object in the recipient applet;  
12 representing device information as a graphical user interface object; and  
13 providing access to the graphical user interface object to the model adapter object  
14 in the recipient applet using the reference to the model adapter object.

1 17. A computer usable medium whose contents cause a computer to remotely manage  
2 a plurality of network devices using a plurality of unsigned applets launched from  
3 different network devices, the plurality of unsigned applets including a device applet,  
4 wherein each device is managed with its respective device applet launched from a server  
5 on its device and the unsigned applets are communicatively coupled within the same  
6 shared environment, by:

7 unpacking device information represented as a graphical user interface object to a  
8 form usable by a model object of a non-graphical user interface class; and  
9 adding the unpacked device information to the model object.

1 18. In a system comprising a client computer having a processor, a memory, a  
2 display, a communication port and a browser, the browser being communicatively  
3 coupled with a plurality of device servers, each device server being located on a network  
4 device, a computer usable medium whose contents cause a computer to remotely manage  
5 a plurality of network devices in a system by:

6            requesting from one of the devices a webpage having an unsigned central  
7   management applet and a request for an unsigned device applet from each of the device  
8   servers;  
9            executing the requests for each unsigned device applet;  
10          each device applet receiving device information directly from its respective device  
11   server; and  
12          each device applet communicating its device information to the central  
13   management applet within the same webpage.